



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF
WU-16J

March 19, 2009

Herschel McDivitt, Director
Division of Oil and Gas
Indiana Department of Natural Resources
402 West Washington Street, Room W293
Indianapolis, Indiana 46204

Dear Mr. McDivitt:

Thank you for the hospitality you and your staff extended to us during the evaluation we conducted of your Division's Underground Injection Control (UIC) program on October 28-30, 2008. This letter transmits our final report which documents our findings and recommendations from that visit. The review was quite productive and we continue to be impressed with the high quality of the UIC program being implemented for Class II wells in Indiana. We also continue to be impressed with the outstanding level of commitment and dedication of both the management team and the staff.

Our overall findings indicate that the Indiana DNR's Division of Oil and Gas is operating a sound and effective UIC program. The Indiana DNR's current program continues to be consistent with the approved program and continues to be on track toward meeting program objectives and workplan commitments. The expertise that your program has developed over the years has enabled the Division of Oil and Gas to continue to implement an exemplary program. We commend you and your staff for your perseverance in this effort.

We look forward to continuing to build on the partnership that has developed between our agencies over the years through technical exchange, information sharing, and coordination on national and regional efforts. We are also appreciative of the role you have played in bringing the Region 5 state and Federal UIC programs together through joint meetings, such as the carbon sequestration meeting that we are planning to hold in Indiana this coming summer. If you or members of your staff have questions or need additional information, please contact me at (312) 886-6594 or John Taylor or Lillie Davis of my staff at (312) 886- 4299 or (312) 353- 2202, respectively.

Sincerely yours,

A handwritten signature in black ink, which appears to read "Rebecca L. Harvey".

Rebecca L. Harvey, Chief
Underground Injection Control Branch

Enclosure

cc: Mona Nemecek

**THE INDIANA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS
UNDERGROUND INJECTION CONTROL PROGRAM FOR CLASS II WELLS
PROGRAM EVALUATION REPORT
PREPARED BY USEPA, REGION 5
OCTOBER 2008**

EXECUTIVE SUMMARY

The Indiana Department of Natural Resources (InDNR) Division of Oil and Gas administers the Class II well program to ensure that underground sources of drinking water (USDWs) are protected from contamination by injection well activities. The InDNR receives a Federal Underground Injection Control (UIC) Grant from the U.S. Environmental Protection Agency (USEPA) for approximately \$113,000 to maintain a Class II inventory of approximately 1336 wells. The state's fiscal year runs from July 1 through June 30. From October 28 through 30, 2008, the USEPA Region 5 UIC program review team (Lillie Davis, John Taylor, Jeff McDonald, and William Bates) conducted an in-depth review of the InDNR, Division of Oil and Gas' UIC Program for Class II wells. The purpose of the Class II program review process is to ensure that InDNR is adequately carrying out its program consistent with its approved application, and continuing to protect USDWs. Our last in-depth review of InDNR's UIC program was conducted in 2004. The review team focused on the entire InDNR UIC program; our findings are presented under two general headings: 1) Program Administration; and 2) Technical, including permitting, enforcement, and field activities.

The review team's specific observations and recommendations were discussed during the exit interview with InDNR management and staff representatives. They are presented in greater detail in this report, with the review team's recommendations at the end of each general area. In sum, we have found that the InDNR continues to administer a high quality UIC program with thorough and timely permit reviews, an enforcement program which focuses on abating and reducing non-compliance, and a field inspection program which has been strengthened through controls which have now been fully implemented. The expertise that InDNR's program has developed over the years has enabled the Division of Oil and Gas to continue to implement an excellent program through the dedication of management and staff. Among the accomplishments of the past four years, we would specifically highlight the following:

- (1) Increased program effectiveness through reorganization, increased staffing, and long term planning by the Division of Oil and Gas;
- (2) Increased accountability for field activities through effective implementation of oversight measures and establishment of dedicated positions for well pluggings and site investigations;
- (3) Continued effectiveness of well plugging effort;
- (4) Continued high quality permitting and enforcement programs; and

- (5) High level of interest in important new priorities, including the emerging carbon sequestration program, and database upgrades through the adoption of the Risk Based Data Management System (RBDMS).

We commend the InDNR on their outstanding efforts and we offer our comments to help in the further improvement of an excellent program. Our principal recommendations focus on providing even more emphasis on current state efforts in the areas of carbon sequestration and database development. USEPA welcomes InDNR as a partner in the carbon sequestration effort, and we would like to work with InDNR when the time is appropriate to tie into the new national UIC database.

PROGRAM ADMINISTRATION

A. Organizational Changes in the Division of Oil & Gas

Herschel McDivitt is the Director of the Division of Oil and Gas. The Division Director coordinates all oil and gas related programs, manages the Division's budget, directs management of senior staff, acts as the proxy for the official representative to the Interstate Oil and Gas Compact Commission (IOGCC), coordinates the utilization of state owned land, acts as the hearings officer for informal hearings, and develops and monitors the Division's strategic plan, and oversees all Division data management initiatives. Presently, the InDNR Division Director oversees a staff of 19 employees and supervises the Division's central office administrative staff and processes. InDNR has been able to backfill previous vacancies and create new positions due to increased oil and gas severance fees. This in turn has allowed the Division to further enhance what was already a high quality program. The Division is organized into three Sections: Abandoned and Orphaned Sites, Technical Services, and Inspections and Enforcement. Each of the three Sections reports directly to the Division and is led by a Manager. The Manager of Inspections and Enforcement Section also serves as the Assistant Division Director.

Mona Nemecek serves as the Section Manager of the Technical Services Section. Among other functions, the Section reviews permit applications, conducts file reviews of existing Class II injection wells, provides technical assistance, develops Division programs, and prepares technical and rule documents for consideration and promulgation. It also serves as the point of contact with USEPA for reporting and other grant requirements. The Section includes a Manager, 3 petroleum geologists and a field geologist, who supports permitting activities and investigates potential contamination incidents and complaints.

Jim AmRhein serves as the Section Manager of the Inspections and Enforcement Section, as well as Assistant Division Director. The Section also prepares, implements, and tracks compliance actions including Notices of Violation, Administrative Orders, and Penalty Assessments. The Section is also responsible for most field activities related to oil and gas and UIC wells. It includes an Assistant Director, two Field Inspectors who are located in the north and central part of the state, and a Field Supervisor, Kevin York, who supervises 6 field inspectors from the

Evansville office.

Mary Estrada serves as the Section Manager of the Abandoned and Orphaned Sites Section. Among other functions, the Section reviews abandoned well sites for inclusion in a statewide list of sites that may qualify for state closure action. The Section also initiates, monitors, and completes contracts for well closure and site remediation work related to improperly abandoned sites in the orphan sites program. Mary is also responsible for budget preparation, and tracking and reporting. The Section consists of a Manager and an Inspector who provides field support for an expanded well plugging program, including assisting with field location and inventorying of additional wells that need to be added to the inventory. The plugging of wells on the exceptions list is the responsibility of this Section.

B. Budget/ Staffing

As with most states, for many years, InDNR's budget was essentially flat. This led eventually to a substantial loss of positions in the Division, which impacted the ability of staff to properly maintain program functions. However, with the rising price of oil, severance tax revenues have risen substantially during the past 2 years. This enabled the Division to argue successfully for additional positions; accordingly, funded positions in the Division have now risen from 16 to 20. This has allowed the Division to hire two petroleum geologists to assist in permit application reviews, as well as file reviews of existing wells. It also has provided for additional field support across the board, allowing the Division to more heavily invest in the closure of abandoned wells and investigation of contamination incidents.

It is recognized that the Division's improved budget is in large part dependent on the increased oil and gas activity that came with substantial price increases over the past several years. This in turn has been accompanied by reduced General Fund Revenues, as the State of Indiana, like almost all states, currently faces substantial revenue shortfalls, due to the state of the national economy. The dramatic price fluctuations in the price of a barrel of oil over the past year therefore provide a measure of uncertainty with regard to long term funding levels. USEPA, unfortunately, cannot offer additional financial support at this time since the national UIC budget has not been increased in nearly 20 years. As a result, the Federal grants cover less activity each year due to the inevitable rise in salaries and other operating expenses over time.

C. Rule/ Procedural Changes

The InDNR will continue to update their rules to make them more effective in protecting underground sources of drinking water. The Division will discuss major changes with Region 5 prior to adopting the rules and has agreed to provide the complete packages to the Region in a timely manner for incorporation into required updating of the primacy package in accordance with 40 CFR Part 147. Since 2004, the Division has not made any rule changes. However, a non-rule policy has been approved and implemented as Natural Resource Commission Bulletin

#58. Although it does not directly affect Class II wells, this policy establishes guidelines for drilling units and well spacing for horizontal wells. It also provides for exceptions to spacing and drilling unit requirements for oil production wells drilled within a secondary recovery project or a voluntary unit and for coalbed methane wells drilled within the mined out area of an abandoned underground mine.

The Division is in the process of updating the rules to provide guidelines and structure for coalbed methane production and to incorporate the non-rule policy approved as NRC Bulletin #58 into the rules. A longer range goal is to completely reorganize the existing Rules to facilitate their navigation, particularly by new operators.

D. Reporting

During the past several years, USEPA has implemented a detailed strategic planning process which includes the development of program specific measures for each environmental program. These include national Program Activity Measures (PAMs) which need to be reported at the mid-point and end of the Federal fiscal year. The PAM measures affecting Class II programs have varied over time. At this point, the only measure requiring a commitment from the InDNR is the percentage of Class II wells which have lost mechanical integrity and which are returned to compliance within 180 days. In previous years, there have been other measures including the percentage of wells maintaining compliance, and the number of inspections conducted per year. In every case, the InDNR has met or exceeded their commitments, and numbers have been reported to USEPA in a timely manner. At times, the Region has needed commitments or reporting of activities on a very short turn around time due to requests from USEPA Headquarters; InDNR has always met the requested timeframes in a very cooperative manner.

At this time, USEPA continues to require submission of the 7520 reporting forms, which have been utilized since the inception of the UIC program. The InDNR has consistently provided these forms to the Region by or ahead of all required due dates. InDNR has also provided annual inventory numbers to Region 5 in a similar fashion. Once the new national UIC database, as discussed below, has been fully implemented in Indiana, it should be possible to discontinue use of the 7520 forms, and possibly manual reporting of inventory. Since it will probably take at least a couple of years before InDNR will be in a position to fully link to this new system, the Division of Oil and Gas should expect to continue submitting 7520 forms during this timeframe.

The InDNR has also consistently met all grant requirements. Annual grant applications and workplans have consistently been submitted in time to qualify for processing of the annual on-going program grant. The submissions have been complete and accurate and very little follow-up has been required. At the time of the review, the FY 2009 application had not been submitted due to turnover in the InDNR's grants administration area. The application was subsequently submitted and the grant awarded in December 2008. The InDNR has also provided the mid year and end of year narrative reports

necessary to meet all grant requirements.

E. Data Management

The InDNR currently utilizes a Microsoft SQL based data system to track the State's Class II and oil and gas wells. This system has been adequate to track the various actions taken including permitting, enforcement and inspections, however, lacks the sophistication necessary to employ such functions as e-services and seamless data transfer. As a result, state has been working with the Ground Water Protection Council (GWPC) to adopt the Risk Based Data Management System (RBDMS) which has been developed by the GWPC through funding provided by USEPA and the Department of Energy. The basic platform has now been almost completed, however, it will be necessary to fine tune the system to meet Indiana's specific needs. The InDNR intends to award a contract to accomplish this task; they estimate it will take about 6 months to complete the work. At the time of the review, the Oil and Gas Division had only shared use of a part time Information Technology (IT) employee. Since that time, the InDNR has devoted additional IT resources to the database conversion effort and has made a commitment to the completion of the project.

During the review, the USEPA Regional Data Coordinator gave a brief presentation on USEPA's new national database, which is being designed to draw from common required data elements from all State and Regional UIC databases. Implementing this database is considered essential to the future of the national UIC program, and USEPA strongly urges the participation of all state programs. Among the benefits of the system are:

- First and foremost, existing summary reports noted above will be generated from the UIC database, thus reducing the State and DI reporting burden and associated cost.
- Second, data quality will be measurably improved through more consistent definitions and system validation checks.
- Finally, having national well-level electronic data will improve communication of the program's public health benefits thereby leading to improvement of public health through improved management of injection activities.

After the presentation, which mainly covered the structure of the database and how it would be used on a national level, there was discussion on whether INDNR would be willing to join in the process at this time. InDNR indicated that they needed to first complete the conversion to RBDMS, after which time they would assess how other states currently engaged in the process had fared. Once this has occurred, the Region would like to negotiate a Trading Partner Agreement with the InDNR to reflect the roles of the respective parties in moving toward a data transfer approach. InDNR representatives agreed to the concept of such an agreement, with the details subject to the aforementioned assessment.

Region 5 also discussed the Exchange Network grant program, which can provide funding to support the work of tying into the national database; other Region 5 Class II primacy agencies have already applied for and/or received funding through this program. At the time of the review, lack of IT support was also an issue, however, as mentioned above, this problem has been resolved, at least for the RBDMS conversion.

InDNR is currently using laptops to acquire field data. The data is transferred to the Division's main database on a routine basis. The Division has improved its GPS capability, providing more timely, accurate, and meaningful data related to the inspection of all wells and facilities including Class II facilities.

F. Quality Assurance Management Plan (QMP) and Virtual Procedure Manual (VPM)

The QMP for the InDNR's UIC program was approved by Region 5 on October 17, 2000. This approval was based in large part on the VPM, which provides an excellent framework to instruct staff on all of the policies and procedures of the Division's program. The Region continues to support the VPM as a creative and innovative approach to provide both training and on-going assistance and enable the staff to maximize the efficiency of their efforts. Since it is necessary for QMPs to be updated on a recurring basis, the Region will review how the VPM will fit into Regional schedules and will advise the state of any necessary actions.

G. Partnerships/National Activities

The InDNR has continued to pursue partnerships which have increased the effectiveness of the program, as well as providing for better buy-in by the public in the goals of the Division's program. For instance, by working with the Southwest Brine Coalition between 2005 and 2008, the InDNR was able to save \$55,000 on the plugging of 21 wells. While this organization is no longer viable, the state is continuing to seek out other partners. The InDNR has also continued to partner with other regulatory agencies including the Indiana Department of Environmental Management (IDEM), who the Division works closely with on any oilfield releases to the surface.

Another significant partnership has been the Division's efforts to work closely with Region 5 and the other oil and gas agencies from Region 5 states (Illinois, Michigan and Ohio) in exchanging information and consulting with each other on technical and programmatic issues involving the Class II UIC Program. This partnership has included joint meetings every several years, which the InDNR has hosted involving all five agencies and other invited guests, including the Ground Water Protection Council and USEPA Headquarters. In view of the great national interest and attention which is currently being focused on carbon sequestration, a meeting on that subject was held in

March 2008 at Pokagon State Park in northeast Indiana. The InDNR assisted with and participated in the meeting. Now that draft national regulations on carbon sequestration have been issued, we are planning a follow-up meeting around July 2009. The InDNR has offered to help plan and lead this session, and Division of Oil and Gas management and staff are currently working with Region 5 in this effort.

The InDNR also continues to play a major role in national activities including the Interstate Oil and Gas Compact Commission (IOGCC), where the Division Director attends meetings twice a year and has served on various committees. The InDNR has long been active in IOGCC, which is the primary state organization involved in oil and gas production and regulation. IOGCC is currently playing a major role in the carbon sequestration effort led by the Department of Energy and the USEPA. The Division Director also participates as a member of the Appalachian/ Illinois Basin Directors group and on the Council of State Regulatory Officials. Division representatives have also participated in the meetings of the Indiana Oil and Gas Association and the Illinois Oil and Gas Association.

The InDNR has continued to work with the Ground Water Protection Council (GWPC), subject to the availability of resources. GWPC is more focused on UIC activities and provides the states an opportunity to interact with USEPA officials from Headquarters and the various Regions on a wide range of issues impacting state programs. This includes the carbon sequestration (CO₂) effort, where GWPC has presented a number of CO₂ workshops in connection with the Annual UIC Meeting and Annual Technical Forum, and has established a state CO₂ workgroup, to provide input to USEPA. In addition, GWPC has worked with those states interested in adopting the RBDMS data system. As noted, InDNR is currently working with GWPC to implement RBDMS in Indiana.

H. Emerging Issues

Carbon sequestration is a very major emerging national priority, which has the potential to greatly expand the workload required of both the federal and State UIC programs. It is a key element of the national strategy to address climate change and has attracted the attention of public officials, industry and the general public. Recently, the Governor of Indiana has expressed his interest in developing carbon sequestration opportunities in the State, and the InDNR expects to play a major role in this effort. Throughout the country, Regional partnerships have been formed and demonstration projects initiated. USEPA has developed draft regulations on an expedited schedule; these proposed regulations were issued in July 2008, and public comments accepted until December 2008. A number of major technical and policy issues remain to be resolved as part of the final rulemaking. The draft regulations propose a new Class VI for projects intended for sequestering carbon, but also provides for continuation of Class II carbon sequestration as part of enhanced oil and gas recovery projects. How the distinction will be drawn between projects which do both will need to be clarified in the final rule, as well how

Class VI primacy is to be granted and whether adjustments to Class II primacy and/or existing State regulations will be needed.

The Division of Oil and Gas has expressed a strong interest in the carbon sequestration effort and has volunteered to help plan and lead a second Regional Sequestration Meeting that we are tentatively planning for July 2009 in Indiana. The decisions made in the final rulemaking will impact how InDNR and other state agencies regulate carbon sequestration wells, and Region 5 will stay in close contact with the Division of Oil and Gas throughout the process. The InDNR has indicated that the State of Indiana will consider applying for Class VI primacy, as well as amending Class II primacy if necessary, once the USEPA regulations are finalized.

Coalbed methane is another emerging technology, which has had a large impact on the UIC program in some western states. In Indiana, the interest in coalbed methane has been delayed pending the resolution of the resource ownership. There are, however, several companies that are currently engaged in active coalbed methane production or evaluation of the production potential in Indiana.

Recommendations/Conclusions

1. Region 5 recognizes the reality of budget shortfalls which are affecting governments on all levels, and that the InDNR has been fortunate to recently receive increased funds, through the oil and gas severance tax. The InDNR has done an excellent job of maintaining a high quality UIC program, which has been further enhanced by filling longstanding vacancies for technical staff. Planning efforts by Division of Oil and Gas management have provided an excellent framework for the future, and we commend the InDNR for their commitment to maintaining staff levels necessary for the longterm viability of the program.
2. The InDNR continues to implement rules and policies to more effectively regulate oil and gas and UIC wells in Indiana. Region 5 commends the Division's efforts to improve the program through use of available mechanisms.
3. Region 5 appreciates InDNR's cooperation with changing reporting requirements, and their commitment to providing timely and accurate reporting to meet USEPA schedules and requests. We commend the InDNR on consistently meeting all national Program Activity Measures (PAMs) commitments.
4. The new national UIC database will be important to the future of the UIC program, and to be most effective, needs the participation of all primacy state agencies. InDNR is currently in the process of adopting the Risk Based Data Management System (RBDMS) which will require at least six more months to complete. Region 5 strongly supports the move to RBDMS, which should enable the state to better track and manage the entire

UIC/oil and gas program. After RBDMS has been fully implemented, we strongly encourage the InDNR to considering working with USEPA to tie into the new national database, and we would like to negotiate a Trading Partner Agreement with you at that time. Other Region 5 Class II primacy agencies have applied for and received funding through USEPA's network exchange grants to support this effort, and this mechanism would be available to In DNR as well.

5. The Indiana Virtual Procedure Manual has been an effective tool for training new staff and providing an easily accessible link to the institutional memory of the program. We encourage the InDNR to continue to keep the system current. Region 5 will advise InDNR of any quality assurance / quality management requirements that may need to be met.

6. Carbon sequestration is an extremely important emerging issue, which is likely to have a major impact on the future of the UIC program. The InDNR is very interested in playing a significant role in the implementation of this effort in Indiana, including taking a leading or supporting role for the State of Indiana's efforts to possibly seek primacy once new national regulations governing carbon sequestration are finalized. Region 5 will do everything possible to support the InDNR in these efforts, including sharing of information, as it becomes available.

7. Region 5 commends the strong leadership role InDNR has taken in national and regional activities. We very much appreciate InDNR's offer of assistance in organizing the second Midwest Regional Sequestration meeting planned for 2009.

TECHNICAL

A. Permitting

The Permitting and Compliance Section issued 106 Class II permits, modified 45 permits, reviewed 231 files, and conducted 188 expanded file reviews from March 2005 through October 2008. Six permits were selected for review with issue dates ranging from September 30, 2005 thru October 14, 2008. The permit files/process was compared to the InDNR Oil & Gas Rules for consistency. As part of the review we looked at several aspects of the permit and permit application. Some of these areas are calculation of maximum injection pressure, area of review, well construction, and public noticing. All aspects of the permitting process seemed thorough, and calculations and data had more than adequate backup when required from the operators or the field inspection staff.

B. Aquifer Exemptions

During the 2000 evaluation, the potential for "field" aquifer exemptions was initially

discussed, as opposed to the well by well exemptions which have been granted in Indiana in the past. At the time, Region 5 indicated that we had not previously taken such an approach, and that any such proposal would involve serious questions which would require further study. This has proven not to be an issue in Indiana, as such aquifer exemption requests have been very infrequent (less than 10 since primacy was granted) and no requests have been forwarded on to Region 5 in the past 12 years. During the 2008 review, InDNR managers reiterated that if the Division were to receive an aquifer exemption request, they would want to review it on a well-by-well basis and would not consider granting approval on a field wide basis.

C. Mechanical Integrity Tests (MITs)

Every five years, the regulations require operators to demonstrate that mechanical integrity is being maintained for Class II injection wells through running a pressure test. During the 2000 review, it was noted that many operators were not completing the test by the time of the 5 year anniversary of the last test, and thus required an enforcement notice to get them to belatedly run the test. As a follow-up to that review, a MIT notice letter was developed which is sent out 30-45 days in advance of the MIT demonstration being due. Use of this letter has been implemented, and has been very successful in reducing non-compliance with the test due date. As a result, less than 3 % of the operators are late in running the MIT. The number of MIT's run each year depends on the number due for that year. By way of comparison, during the 2004 review we noted that in 2003, 420 MIT's were run and in 2004, 236 were run. This trend appears consistent, as the records examined during this review show that 279 tests were run in 2007, and 379 in 2008.

D. Well Pluggings

As of the time of the U.S. EPA review, there were approximately 650 wells listed on the Division's Orphan Well list and the State listed 715 wells as "inactive." In addition, approximately 10 wells are added to the Orphan Well list each year. During State Fiscal Year (FY) 2008, which ends on July 1, 2008, the InDNR has been budgeted \$328,000 from the Oil and Gas Environmental fund to address these issues. The budget for the next 2 years should remain the same provided that the new budget is passed early next year by the state legislature. State FY 2004 was the first year that InDNR was required to have a budget appropriated through the State Legislature. Prior to that, the Division was able to spend as needed from the Environmental Fund without a budget. The State has a 1% severance tax on oil and natural gas produced in the State and because of the recent high prices for oil and natural gas, the State's Oil & Gas budget has been unusually sufficient.

In terms of the number of wells plugged, 21 wells were plugged in 2005, 20 wells in 2006, 13 wells in 2007, and 53 wells in 2008. These projects also include site clean up of tanks, pits and remediation, as well as actual plugging. The Division mostly uses state

contracting as the method to set up projects, but also has used grants to support the partnerships mentioned above. The number of plugged wells is tracked by the projects' date of approval by the Department of Administration, Division of Public Works, and is categorized by the State Fiscal Year to coincide with budget time frames. Many projects overlap fiscal years, as completion dates occur several months following approvals. The number of wells plugged in a given year has varied due to the size of the various projects, and the availability of contractors to work on the projects. The State now has a dedicated inspector handle orphan well issues.

The Division's long term prospects are to eliminate all wells on the USEPA Exceptions List, inventory Orphan Wells in Indiana and establish a priority rating for each well and to continue to eliminate all level 4 (high priority) wells that currently are or have a high potential to cause environmental damages. At this point, the Division is plugging high priority and surrounding wells as they are reported. Since taking care of high priority and surrounding wells is currently keeping the Division quite busy, there has not been time to conduct an inventory of known wells and prioritize them. The Division hopes to begin this process within two years.

E. Compliance Evaluations

A key element of the InDNR's approach to compliance is the performance of file reviews on a 5 year cycle for each Class II well. These reviews allow the Division to address changes which have occurred during that period and which can be identified through annual inspection reports, as well as the required self reporting submitted by the operators. The process provides a safeguard that even minor problems will eventually be identified, and helps maintain deterrence by referring violations to the enforcement process. Through the Federal Fiscal Year 2008, the Division had completed 137 file reviews, which is well below the pace needed to achieve an average of about 270 file reviews per year if the 5 year review cycle is to be maintained. However, it should be noted that the Division continues to meet the specific commitments made in their annual grant program plans for file reviews, and that their effort in this area exceeds what many other Class II programs are able to accomplish.

In addition to file reviews, the Permitting and Compliance Section reviews Quarterly Monitoring Reports that are submitted by operators for all Class II wells. These reports contain information about the maximum pressures, volumes, and number of operating days per month for each well. The information is monitored weekly and reported by month for the preceding quarter. Section personnel review the reports for compliance with permit conditions and program requirements. It appears that these reviews are being successfully completed, and they contribute toward effective compliance.

F. Enforcement and Compliance Assurance

During Federal Fiscal Year 2008, the Division issued 61 Warnings of Noncompliance for

non-significant violations. Forty-six percent of these actions were not corrected in a timely manner and were escalated. This compares with 72 warnings and 15% from the 2004 evaluation. The Division issued 67 Notices of Violation (NOVs) during Federal Fiscal Year 2008 with approximately 10% being escalated to the civil penalty stage. This compares with 85 NOVs and 28% being escalated from our 2004 evaluation. The minimum penalty assessed was \$50, with the highest penalty being \$2500. The penalties collected cover the same range, but many are reduced when the permittee returns to compliance following the initial NOV.

State-issued Notices of Violation (NOVs) that have a penalty assessed with them are issued from the Indianapolis office. Some violations automatically receive NOVs with penalty. Injection above the permitted maximum injection pressure, unauthorized injection, and failing a mechanical integrity test (MIT) are UIC violations that automatically receive NOVs with penalty. These violations are identified by a field inspector and then are called in to the central (Indianapolis) office. The central office staff then issues the NOV with penalty, usually on the same day. This is an impressive turn-around time and helps to ensure that the operator returns the well to compliance in a timely fashion. The NOVs reference the date of inspection and the state regulation that the operator is in non-compliance with. They also describe the corrective action to be taken, as well as the date that the action must be taken by.

Region 5's review focused on how the State handles some violations that fall in the significant non-compliance (SNC) category. This includes the ties to the field inspection program, how InDNR determines compliance / noncompliance issues in the office, and how the State communicates to the regulated community. Overall, the State enforcement actions mirror Region 5's focus on significant violations. Regarding mechanical integrity testing, the State uses their enforcement authority to gain the attention of operators that refuse to test in a timely manner. Most operators receiving these NOV's finally test and the violation is released after the assessed penalty is received. The amount of the penalty may be negotiated with an operator at the operator's request but the final penalty amount, while originally based on the penalty matrix, is determined by each individual situation. The Region feels that the State's enforcement actions and use of discretion is fair, defensible and their program is commendable.

G. Citizen Complaints

The Division receives approximately a dozen citizen complaints each year. It appears that InDNR is doing a good job of addressing them, as reflected by files for the individual cases, and also the absence of complaints escalated to Region 5. When a complaint is filed by any citizen, the Division's first step is to dispatch an inspector to the area so that they may determine if the complaint is legitimate. If corrective action should be taken by an operator, the inspector will initiate enforcement action accordingly. The violation is then tracked through the enforcement system and is either escalated or released as determined by the inspector. The State has an inspector that devotes all his time to

investigating contamination issues which are commonly related to production operations, but are none the less significant environmental issues worthy of their focus.

The InDNR provided the following details on how a recent citizen's complaint was handled. Scope Operating Company was originally a Texas corporation that received permits to operate wells in Indiana in the late 1990's. Scope was "operating" 19 wells in 2006, when InDNR observed through inspections, that many of the wellsites were in noncompliance which caused the Division of Oil and Gas to take enforcement action. In 2007, the Division filed a complaint to revoke several of Scope's permits, which eventually resulted in Scope plugging 7 of the wells.

By early 2008, Scope had left the State, and they were not tending the wells at all. The Division took additional enforcement action, seeking permit revocation on all of Scope's remaining wells. Scope did not appear for any of the scheduled pre-hearing status conferences, and they were eventually defaulted. Scope was ordered to plug and abandon all of its wells by the administrative law judge, but since Scope did not return to Indiana, the wells sat in disrepair.

In mid 2008, the Division received verbal complaints from the landowners about the wellsites that had been abandoned by Scope Operating. In late 2008, through the Division's orphan sites program, the State addressed the landowners' concerns by plugging 10 of the wells that had been part of the earlier enforcement action. The two wells that remain are scheduled to be plugged in 2009, when the ground conditions improve. The plugging of the final two wells will bring a successful close to this issue brought on by an operator who did not take responsibility for its own actions.

H. Field Inspection Program

The InDNR's field inspection program has historically been strong with very timely witnessing of UIC activities. This includes annual Class II well inspections. Each inspection includes a surface inspection of the well and the associated fluid storage facilities. In addition, pressure readings are taken at each routine inspection. The InDNR indicated that when a routine inspection indicates that a facility is in noncompliance, the inspection frequency is changed to at least once every 60 days until either the noncompliance is corrected, or the case is referred to the Attorney General's Office for legal action.

The INSPECT CHECK program that was implemented in 2004 has successfully demonstrated the Division's confidence in the professionalism of the present field inspection staff. This program established supervisory standards of review for field activities including supervisory follow-up inspections and unannounced supervisor visits during well tests and plugging activities. It also uses electronic data reporting techniques

to ensure that appropriate supervision of staff is taking place, providing a thorough documentation of field activities.

Recommendations/Conclusions

1. The InDNR permit program remains very effective. The permit application review process continues to be very thorough with very good documentation. All permit actions were on the conservative side and the permits/conditions were found to be protective of underground sources of drinking water. The paper files and the Virtual Procedure Manual database were identical in matching data content.
2. The InDNR continues to take a conservative approach to granting aquifer exemptions, which Region 5 supports. This provides another safeguard to protect USDWs.
3. The InDNR has effectively implemented new call-in procedures for mechanical integrity tests, which have greatly reduced the number of wells not completing the test within the required 5 year timeframe.
4. The InDNR continues to run a very effective well plugging program, which utilizes a variety of approaches to maximize results. Region 5 especially compliments the Division on the pro-active use of the additional funds which have become available for this effort.
5. The InDNR's file review process has proven to be an effective tool for assuring compliance. Recent additions to the technical staff have strengthened this effort.
6. In general, InDNR maintains an excellent enforcement and compliance program where violations are quickly identified and an appropriate response taken. Region 5 supports the InDNR's policy of maintaining some level of penalty, even when compliance is achieved, in order to provide for greater level of deterrence.
7. The InDNR continues to deal very responsively with citizen issues, including complaints.
8. The InDNR has effectively implemented a number of measures to provide increased accountability to the field inspection program. These measures should ensure that the integrity of the program is maintained, and we strongly encourage the InDNR to maintain this level of diligence.